REMARKS/ARGUMENTS

Claims 16, 18, 19 and 22-34 are active in the case.

New Claims 23 and 24 replace canceled Claims 15 and 17 and recite the epoxidation degree of between 2.27 and 5%. Basis for this range may be found in the claims, as originally filed, and copolymer A2 of Table 1 and copolymer A5 of Table 3 of the specification. New Claims 25-34 are based on original Claims 2-4, 6 and 7 and are dependent on new Claims 23 and 24, respectively. Claims 16, 18 and 19 have been amended to depend on either new Claims 23 or 24. No new matter has been entered into the amended claims or new claims.

The rejection of Claims 15-22 under 35 U.S.C. § 103(a) as unpatentable over Hsieh et al., Terakawa et al., EP 654,364 in view of Segatta et al. is traversed.

The claims, as amended, distinguish over the combination of references, because Hsieh et al. and Terakawa et al. do not teach or suggest the use of silica, as in the present claims. The European patent does not show the epoxidation percent of from between 2.27 and 5.0% as in the present claims, but teaches on page 5 at least 20% of epoxy groups as being especially advantageous and does not teach or suggest any lower percent of epoxy groups anywhere else in the specification. Finally, Segatta et al. teaches away from the invention of the present claims, since it requires the use of a silane coupling agent, which is specifically excluded from the present claims. Therefore, the claims distinguish over the combination of references.

Further, accompanying the response is a Declaration under 37 C.F.R. § 1.132, which demonstrates superior results for the composition of the present claims within the epoxidation percent range of the present claims of 2.27-5.0% as compared to compositions of the prior art, which are outside the epoxidation percent range of the present claims.

As described in the Declaration, the data of Tables 1 and 2 should be divided and interpreted as two separate groups, because of the difference in vinyl content of each of the groups and the fact that the vinyl content of the copolymers influences the properties of the copolymers, in particular T_g and, consequently, dynamic behavior and resistance to abrasion.

Tanδ 1 Hz, 0.1 % strain, 0°C is considered to be a good measurement of the "wet grip" of a tire, while Tan δ 1 Hz, 5% strain, 60°C is considered to be a good measurement of the "rolling resistance" of a tire. The ratio Tanδ 1 Hz, 0.1% strain, 0°C/ Tanδ 1 Hz, 5% strain, 60°C is considered to be a significant ratio, because the ratio represents a compromise between "wet grip" and "rolling resistance" and a high value for the ratio indicates optimization of the dynamic performance of the composition making up the tire, assuming the mechanical properties of the tire are the same.

Table 2 shows the above-mentioned ratio as highest at 2.55 for Ml-A2, which represents copolymer A2, within the epoxidation percent of the present claims at 5% epoxidation, as compared to Ml-A1 at 0.92, which is the unepoxidated reference copolymer, and Ml-A3 and M1-A4 at 0.84 and 2.28, respectively, both of which are outside the epoxidation percent of the present claims, copolymer A3 being 0.68% epoxidation and copolymer A4 being 11% epoxidation, the epoxidation percent range of the present claims being 2.27-5.0% epoxidation. Further M1-A2 is superior in minimizing abrasion loss as compared to M1-A1, Ml-A3 and Ml-A4 and M1-A2 is also superior in not demonstrating too high of a hardness, as compared to M1-A1, Ml-A3 and Ml-A4. The above results are especially significant between Ml-A2, having a 5% epoxidation within the range of the present claims, and having an abrasion loss of 111 and a Shore hardness of 75, as compared to M1-A4, having an 11% epoxidation, outside the range of the present claims and having an abrasion loss of 157 and a Shore hardness of 82.

The comparisons of M1-A5, M1-A6 and Ml-A7 demonstrate that M1-A6, which has an epoxidation percent of 2.27 within the range of the present claims, is much better in the above-mentioned ratio than M1-A5, which uses a copolymer with an epoxidation percent of 0 and very close to but slightly less than M1-A7, which uses a copolymer with an epoxidation degree of 14%, outside the range of the present claims. However, M1-A6 is much superior in minimizing abrasion loss, as compared to M1-A5 and Ml-A7, and also superior in not demonstrating too high a hardness, as compared to M1-A5 and M1-A7. The results are especially significant, when the abrasion loss of M1-A6 of 146 is compared to the abrasion loss of 210 for M1-A7 and the Shore hardness of M1-A6 of 72 is compared to that M1-A7 of 79. Therefore, it is clear that the comparative data in the Declaration demonstrates superior results for compositions within the epoxidation percent range of the present claims, as compared to compositions of the prior art, which are outside the epoxidation percent range of the present claims.

Since the comparative data in the Declaration distinguishes the present claims over the combination of references, it is requested that the Declaration be entered and considered.

It is submitted that Claims 16, 18, 19 and 22-34 are allowable and such action is respectfully requested.

Respectfully submitted,

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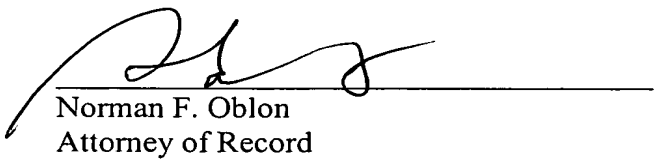

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